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#### C-A OPERATIONS PROCEDURES MANUAL

#### **ATTACHMENT**

#### 7.1.9.a Valve Configuration for Utility Compressor Purge

| C       | A OPM Proce | dures in w  | hich this Attach                 | ment is used. |                 |
|---------|-------------|-------------|----------------------------------|---------------|-----------------|
|         | 7.1.9       |             |                                  |               |                 |
|         |             |             |                                  |               |                 |
|         |             |             |                                  |               |                 |
|         |             |             |                                  |               |                 |
|         |             |             |                                  |               |                 |
|         | <u>Ha</u>   | nd Process  | sed Changes                      |               |                 |
| HPC No. |             | <u>Date</u> | <u>Page</u>                      | Nos.          | <u>Initials</u> |
|         |             |             |                                  |               |                 |
|         |             |             |                                  |               |                 |
|         |             |             |                                  |               |                 |
|         |             |             |                                  |               |                 |
|         |             |             | nature On File_ccelerator Depart |               |                 |

E. Quimby

### **Valve Configuration for Utility Compressor Purge**

| VALVE #   | <u>POSITION</u>  | <u>DESCRIPTION</u>           | P&ID LOCATION |
|-----------|------------------|------------------------------|---------------|
| H2373M    | CLOSED           | Misc.                        | F8            |
| H2374M    | CLOSED           | Misc.                        | F7            |
| H2375A    | CLOSED           | Main process OUT             | B6            |
| H2376A    | CLOSED           | Main process IN              | D8            |
| E2366M    | CLOSED           | DPSL2388E bypass             | E5            |
| E2367M    | CLOSED           | Misc                         | D4            |
| E2371M    | CLOSED           | Oil fill                     | D5            |
| E2377M    | CLOSED           | Oil fill                     | D5            |
| E2387M    | CLOSED           | Oil make up                  | E3            |
| E2399M    | CLOSED           | Oil filter purge             | D4            |
| N2366M    | CLOSED           | Nitrogen vent                | B6            |
| N2370M    | CLOSED           | Nitrogen for regeneration    | C5            |
| V2389M    | CLOSED           | Evacuation                   | B8            |
| W2393M    | CLOSED           | Water purge                  | C3            |
| VALVE#    | <u>POSITION</u>  | DESCRIPTION                  | P&ID LOCATION |
| H2361M    | OPEN             | PT2360 isolation             | D6            |
| H2372M    | OPEN             | PSH2378H isolation           | F8            |
| H2376M    | OPEN             | DPSI2388E isolation          | E4            |
| H2377M    | OPEN             | PI2378 isolation             | F7            |
| H2378M    | OPEN             | PSL2378H isolation           | F7            |
| H2381M    | OPEN             | PSH2381H isolation           | F4            |
| H2386M    | OPEN             | PI2381 isolation             | E4            |
| H2394M    | OPEN             | CA2378 isolation             | B5            |
| E2360M    | OPEN             | PI2388 isolation             | E5            |
| E2362M    | OPEN             | T2362 isolation              | D6            |
| E2363M    | OPEN             | T2370 isolation              | A3            |
| E2364M    | OPEN             | T2363 isolation              | F7            |
| N2369M    | OPEN             | Nitrogen supply regeneration | C7            |
| E2372M    | OPEN             | DPSI2388E isolation          | E5            |
| E2376M    | OPEN             | T2362 isolation              | D7            |
| E2379M    | OPEN             | T2363 isolation              | G7            |
| E2382M    | OPEN             | T2368 isolation              | A5            |
| E2383M    | OPEN             | F2384 isolation              | D4            |
| E2384M    | OPEN             | T2368 isolation              | A4            |
| E2385M    | OPEN             | T2369 isolation              | A5            |
| E2386M    | OPEN             | F2384 isolation              | D5            |
| E2388M    | OPEN             | T2370 isolation              | A4            |
| E2390M    | OPEN             | T2371 isolation              | A3            |
| E2391M    | OPEN             | T2371 isolation              | A4            |
| E2393M    | OPEN             | LI2391E isolation            | F3            |
| E2394M    | OPEN             | LI2391E isolation            | E3            |
| E2395M    | OPEN             | F2395 isolation              | D3            |
| E2397M    | OPEN             | T2369 isolation              | A4            |
| E2398M    | OPEN             | PI2398 isolation             | D4            |
| N2371M    | OPEN             | Nitrogen supply              | C8            |
| W2367MOPE | EN Coolant bypas | ss adjust                    | C3            |

# 5.12.2 Valve Configuration for Utility Compressor Purge (see P&ID 3A995032)

| VALVE # | <u>POSITION</u> | <u>DESCRIPTION</u>   | P&ID LOCATION        |
|---------|-----------------|--|----------------------|
| H3008M  | CLOSED          | Isolate utly comp from prg sply he Isolate utly comp from HP line Isolate utly comp from LP line | eader C4             |
| H3009M  | CLOSED          |  | E4                   |
| H3010M  | CLOSED          |  | E6                   |
| H3013M  | CLOSED          | Isolate utly comp from prg rtn hea   | nder C6 D3 g sply D4 |
| H3031A  | CLOSED          | Low suction pressure control   |                      |
| H3032M  | CLOSED          | Isolate purifier discharge from prg  |                      |
| H3036M  | CLOSED          | Isolate utly comp from mags or ga  | as storage B5        |
| H3039M  | CLOSED          | HP discharge to cryo purifier  | B2                   |
| H3041A  | CLOSED          | Cryo purifier bypass   | A3                   |
| VALVE#  | <u>POSITION</u> | DESCRIPTION  | P&ID LOCATION        |
| H3037M  | OPEN            | Isolate utly comp from purifier  |                      |
| H3043A  | OPEN            | Feed from purifier to utly comp  |                      |
| H3044A  | OPEN            | Utly comp suction low pressure c   |                      |
| H3045A  | OPEN            | Utly comp discharge pressure con   |                      |

## 5.12.3 Valve Configuration for Utly Compressor Used in Main Process Service

| <b>POSITION</b>  | <u>DESCRIPTION</u>  | P&ID LOCATION  |
|--|---|--|
| CLOSED<br>CLOSED<br>CLOSED<br>CLOSED<br>CLOSED<br>CLOSED | Isolate utly comp from prg sply head Isolate utly comp from prg rtn head Isolate utly comp from mags or gas Isolate utly comp from purifier Feed from purifier to utly comp Utly comp suction low pressure control of the specific process. | ader C4 ler C6 s storage B5 B5 D6  |
| OPEN<br>OPEN   | Isolate utly comp from LP line Utly comp discharge pressure contr   | E6 rol high E5   |
|  | CLOSED<br>CLOSED<br>CLOSED<br>CLOSED<br>CLOSED<br>CLOSED<br>OPEN<br>OPEN  | CLOSED Isolate utly comp from prg sply head CLOSED Isolate utly comp from prg rtn head CLOSED Isolate utly comp from mags or gast CLOSED Isolate utly comp from purifier CLOSED Feed from purifier to utly comp CLOSED Utly comp suction low pressure compensation of the property of the prop |

# 5.12.4 Valve Configuration for Utility Compressor Used for Purging in Conjunction with the Cryogenic Purifier

| VALVE # | <u>POSITION</u> | <u>DESCRIPTION</u>                  | P&ID LOCAT | CION       |
|---------|-----------------|-------------------------------------|------------|------------|
| H3008M  | CLOSED          | Isolate utly comp from prg sply hea | ider C     | 24         |
| H3009M  | CLOSED          | Isolate utly comp from HP line      | E          | E4         |
| H3010M  | CLOSED          | Isolate utly comp from LP line      | E          | E6         |
| H3015M  | CLOSED          | Isolate prg rtn line from purifier  | Е          | 33         |
| H3036M  | CLOSED          | Isolate utly comp from mags or gas  | storage E  | 35         |
| H3043A  | CLOSED          | Feed from purifier to utly comp     | Γ          | <b>)</b> 6 |
| H3049M  | CLOSED          | Aerosol Bypass                      | Е          | 33         |
| H3050M  | CLOSED          | Isolate AR301 from prg rtn          |            |            |
|         | 3A995022, p.5   | 5, D4                               |            |            |
| H3013M  | OPEN            | Isolate utly comp from prg rtn head | ler C      | C6         |
| H3032M  | OPEN            | Isolate purifier discharge from prg | sply D     | <b>)</b> 4 |

| H3037M | OPEN | Isolate utly comp from purifier           | B5 |
|--------|------|---|----|
| H3044A | OPEN | Utly comp suction low pressure control    | E6 |
| H3045A | OPEN | Utly comp discharge pressure control high | E5 |

### 5.12.5 Valve Configuration for Utility Compressor Used for Gas Transfer Service

| VALVE # | <u>POSITION</u> | <u>DESCRIPTION</u>                   | P&ID LOCATION |
|---------|-----------------|--------------------------------------|---------------|
| H3016A  | CLOSED          | Purifier feed from gas storage       | В3            |
| H3026A  | CLOSED          | Feed from HP discharge to buffer     | D2            |
| H3031A  | CLOSED          | Low suction pressure control         | D3            |
| H3010M  | OPEN            | Isolate utly comp from LP line       | E6            |
| H3018A  | OPEN            | Low pressure helium feed from but    | ffer D6       |
| H3025A  | OPEN            | High suction pressure control        | D2            |
| H3027A  | OPEN            | High pressure helium to gass storage | ge C2         |